

REMARKS

Claims 1-15 are pending. As previously indicated, Applicants have elected the species of Figure 3 and the sub-species of Figure 3 of the present application. Claims 2 and 15 have been correctly withdrawn by the Examiner as being drawn to a non-elected species and sub-species. However, the Office Action has incorrectly withdrawn claims 11 and 13-14. The Office Action alleges that claims 11 and 13-14 are read on the non-elected sub-species of Figure 4, and refers to page 11, first paragraph.

Applicants wish to clarify that the cited portion of the specification merely indicates that Figure 4 includes a "uniform, oval cross-section throughout." (Emphasis added) This is more limited than the generic structure that is recited in claims 11 and 13-14. Instead, these claims recite an oval cross-sectional shape which is supported as shown in the elected species and sub-species of Figure 3. Furthermore, as stated on page 9, paragraph 1, "the sections 50,52,54 are oval-shaped in cross section." These sections 50,52,54 refer to structure shown in Figure 3, which was elected by the Applicants. Therefore, as the recited oval structure is found in elected species and sub-species of Figure 3, the subject matter of claims 11 and 13-14 should not be withdrawn because it clearly reads on the elected species and sub-species. Moreover, the allegation that claims 11 and 13-14 also read on a non-elected sub-species is irrelevant. The proper test is if the claims read on the

elected species and sub-species, not if the claims happen to also read on the non-elected species and sub-species. Accordingly, the withdrawal of claims 11 and 13-14 is strongly traversed and the claims should be considered.

Applicants wish to thank the Examiner for indicating the claims 3-4, 6-7, 9-10 and 12 would be allowable if rewritten in independent form. However, Applicants have not rewritten claims 3-4, 5-7, 9-10 and 12 into independent form as it is believed that the rejections of base claims 1, 5 and 8 are improper.

35 U.S.C. §103

Claims 1, 5 and 8 stand rejected as being unpatentable over U.S. Patent 2,134,719 to Kocher, U.S. Patent 3,923,323 to Brogan or U.S. Patent 4,146,254 to Turner et al. in view of U.S. Patent 4,945,983 to Dalo, U.S. Patent 5,062,476 to Ryan et al. or U.S. Patent 5,105,877 to Ando. However, the rejections are improper and should be withdrawn.

Referring to the primary references (Kocher, Brogan and Turner), none of these references disclose "a heat exchanger" as recited in the present claims. The Office Action alleges that the heat exchanger is the manner in which the claimed apparatus is intended to be employed. However, a heat exchanger is the structure being claimed in the present application and is not the manner to be employed. The art is filled with patents that recite the phrase "heat exchanger" and it is clearly

considered to be a structural recitation in the art. Further, *Ex Parte Masham* cited in the Office Action to support the non-consideration of the heat exchanger structure does not support this contention. In *Ex Parte Masham*, the claim included instructions where the claimed apparatus was "completely submerged in the developer material." The Board of Appeals stated that this language, referring to the instruction of having the apparatus completely submerged, did not impose any structural limitations which differentiates it from the prior art. Comparing the present claims to *Ex Parte Masham*, the heat exchanger recited in the present claims is structure and not an instruction as stated by the Board of Appeals. Additionally, *Ex Parte Masham* states that the recitation of material intended to be worked upon by the claimed apparatus does not impose any structural limitations. However, the present claims do not recite a material intended to be worked upon, but instead recites physical structure, a heat exchanger. Thus, *Ex Parte Masham* has nothing to do with the claim language of this case and cannot be relied on in support of the assertions in the Office Action.

Furthermore, the words "a heat exchanger" are essential to point out the invention. These words give life and meaning to the other elements recited in the claims, and only through these words can it be known that the subject matter defined by the claims is comprised as a "heat exchanger." For example, the terms cap and tank rely on the structure of a "heat exchanger" to give meaning to the terms. By attempting to ignore the "heat exchanger" structure, the Office Action has implicitly

acknowledged the weaknesses of the cited references; particularly the fact that the primary references disclose tube couplings/fittings and do not disclose heat exchangers.

For the foregoing reasons alone, the rejections are improper and should be withdrawn.

Additionally, the attempted combination of any of the primary references (Kocher, Brogan and Turner et al.) with any of the secondary references (Dalo, Ryan et al. and Ando) is improper. As illustrated in the primary references, Kocher, Brogan and Turner et al. each disclose couplings specifically designed for round tubes. Yet, as seen in the secondary references, Dalo, Ryan et al. and Ando each disclose flattened tubes for use in a heat exchanger. The attempted combination of round tube couplings with flattened heat exchanger tubes is improper because there is no motivation or suggestion as to the desirability of modifying the round couplings by substituting the flattened heat exchanger tubes. In fact, the secondary references teach away from their use in the primary references. Specifically, the secondary references all concern flattened tubes that are brazed to a header. The primary references all disclose removable round tubes which by their very nature cannot be brazed because they are removable. There is nothing in any of the references that suggest that flat tubes would be desirable or an improvement to any of the round tube couplings of the primary references. The Office Action asserts that the secondary references teach

that round tubes and flat tubes are interchangeable, but, at best, this can only be a teaching that they are interchangeable in heat exchangers and particularly those of a brazed construction. The secondary references do not and cannot suggest anything with respect to the round tube couplings of the primary references. Thus, the Office Action has failed to establish a *prima facie* case of obviousness and the rejection should be withdrawn.

Further, one skilled in the art would not consider combining the structure of the primary references with the structure of the secondary references. The secondary references all teach brazed constructions while the primary references all teach removable couplings and therefore, one skilled in the art would not consider the secondary references because of their permanent brazed construction.

Furthermore, the combination of any of the secondary references with any of the primary references would require changing the principal of operation of the primary references and/or render the primary references unfit for their intended purposes. This is not allowable when attempting to combine references. For example, all of the primary references rely on some sort of compression to secure the round tube to the coupler and to provide a leak-proof seal. This structure, which utilizes the principal of compression would have to be completely changed to allow for flattened tubes. This is because the round tubes of the primary references evenly distribute the pressure around the tube and the round shape of the tube provides strength. This is

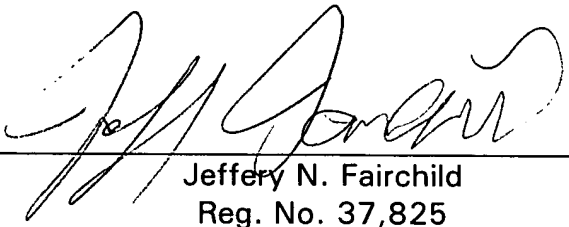
not possible with the flat tubes of the secondary references because the flat sides of the flat tubes would have a greater amount of compression and would therefore begin to cave in. The flat structure does not provide the same hoop strength and resilience as round tubes. Therefore, the principal of operation of the primary references would have to be changed to accommodate the secondary references. Additionally, if the secondary references were combined with the primary references, the primary references would be unsuitable for their intended purpose. Specifically, the primary references disclose couplers that allow the round tubes to be disassembled/removed, whereas the secondary references all, at best, teach that round and flat tubes can be interchanged in a brazed construction. Thus, even if the primary references are modified by the teachings of the secondary references, the flat tubes would have to be brazed to the couplers to accommodate the flat tubes of the secondary references. If the flat tubes were brazed to the couplers, the structure could not be disassembled. Therefore, for these additional reasons, the rejections are improper and should be withdrawn.

While claims 11 and 13-14 were not examined, similar arguments are also valid with respect to the cited references. Therefore, claims 11 and 13-14 are also allowable.

In view of the foregoing, Applicants respectfully request reconsideration of the withdrawal of claims 11 and 13-14 and the rejection of claims 1, 5 and 8 and allowance of claims 1 and 3-14.

Respectfully submitted,

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